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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,709	09/25/2003	Yung-lyul Lee	Q77576	6387

23373 7590 04/12/2007  
SUGHRUE MION, PLLC  
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SUITE 800  
WASHINGTON, DC 20037

EXAMINER
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PHILIPPE, GIMS S

ART UNIT	PAPER NUMBER
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2621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/12/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/669,709

Applicant(s)

LEE ET AL.

Examiner

Gims S. Philippe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

### **DETAILED ACTION**

This is a first office action in response to application no. 10/699,709 filed on September 25 2003 in which claims 1-7 are presented for examination.

#### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory

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double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-7 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 copending Application No. 10/669,729. Although the conflicting claims are not identical, they are not patentably distinct from each other because one skilled in the art at the time of the invention would recognize the advantage of modifying the conditions set in claim 1 of application No. 10/669,729 in order to derive the limitations of claims 1-7 of the present application for the same purpose eliminating blocking artifacts caused by grid noise generated along block boundary as taught by Lee et al.

3. Claim 1 and 4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 28-29, and 32-33 Patent no. 6665346. Although the conflicting claims are not identical, they are not patentably distinct from each other because one skilled in the art at the time of the invention would recognize the advantage of modifying the conditions set in claim 1-3, 28-29, and 32-33 of Patent no. 6665346 in order to derive the limitations of claims 1 and 4 of the present

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application for the same purpose eliminating blocking artifacts caused by grid noise generated along block boundary as taught by Lee et al.

Dependent claims 2-3 and 5-7 are rejected by dependency to claims 1 and 4.

Claims 1-7 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of Patent no. 6,631,162. Although the conflicting claims are not identical, they are not patentably distinct from each other because one skilled in the art at the time of the invention would recognize the advantage of modifying the conditions set in claim 1-3 of Patent no. 6,631,162 in order to derive the limitations of claim 1 of the present application for the same purpose eliminating blocking artifacts caused by grid noise generated along block boundary as taught by Lee et al.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US Patent no. 5474434) in view of Kim (US Patent no. 5946421).

Regarding claims 1-7, Kim '434 discloses an image data filtering method for reducing blocking effect and noise when a frame of the image data is composed of data blocks of predetermined size (See Kim's Abstract, col. 3, lines 61-67 and col. 4, lines 1-4), the method comprising generating flag information on the data block from the bitstream image data (See Kim col. 5, lines 41-47); generating filtering information on the data block from the flag information (See Kim col. 7, lines 24-37); filtering the data block passed through inverse quantization and inverse discrete cosine transform according to the generated filtering information (See Kim col. 6, lines 35-42 and col. 5, lines 24-47).

It is noted that although Kim '434 generates filtering flags information at the boundary regions (See Kim '434 col. 6, lines 35-42), it is silent about looking at the intra or inter mode indication in the information flag.

However, Kim '421 generated filtering flags based on the intra or inter mode indication in the information flag (See Kim '421 col. 4, lines 32-45).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Kim '434 step of generating filtering information flag by incorporating the teachings of Kim '421 wherein the filtering flag is based on intra or inter mode flags. The motivation for performing such a modification in Kim '434 is to reduce the intensity difference between a block and its adjacent blocks as taught by Kim '421 (See Kim '421 col. 2, lines 50-58).

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4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mancuso et al. (US Patent no. 6600839) teaches non-linear adaptive image filter for filtering noise such as blocking artifacts.

Kim et al. (US Patent no. 6175593) teaches method for estimating motion vector in moving picture.

Kishi (US Patent no. 5694489) teaches image signal processing apparatus with no change of signal processing mode in compression/expansion processing loop.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gims S. Philippe whose telephone number is (571) 272-7336. The examiner can normally be reached on M-F (10:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dastouri Mehrdad can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Gims S Philippe  
Primary Examiner  
Art Unit 2621

GSP

April 4, 2007



Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2/27/04, 3/15/06, 11/08/06, 2/22/05, 11/25/03, 5/27/04.